In the Claims

Please amend the claims as follows:

1. (Withdrawn) A medical device, comprising:

an insertable portion capable of being inserted into an orifice associated with a body of a patient, the insertable portion comprising a waveguide structure operable to assist in guiding an optical signal into the body of the patient;

wherein the optical signal is used in a spectroscopic procedure.

2. (Withdrawn) The medical device of Claim 1, wherein the spectroscopic procedure is selected from the group consisting of a transmission measurement, a reflection measurement, a fluorescence measurement, and a near field microscopy measurement.

3. (Withdrawn) The medical device of Claim 1, wherein the waveguide structure assists in detecting a tissue abnormality within the body of the patient during the spectroscopic procedure.

4. (Withdrawn) The medical device of Claim 3, wherein the tissue abnormality comprises cancerous cells.

5. (Withdrawn) The medical device of Claim 1, wherein the waveguide structure assists in extracting a tissue abnormality from the body of the patient during the spectroscopic procedure.

6. (Withdrawn) The medical device of Claim 1, wherein the waveguide structure is selected from the group consisting of an optical fiber, a hollow tube waveguide, an air core waveguide, and a planar waveguide.

7. (Withdrawn) The medical device of Claim 1, wherein the waveguide structure is an optical fiber and at least a portion of the optical fiber is selected from the group consisting of a ZBLAN fiber, a sulphide fiber, a selenide fiber, a telluride fiber, and a fused silica fiber.

8. (Withdrawn) The medical device of Claim 1, wherein at least a portion of the optical signal comprises a wavelength of 1.7 microns or more.

9. (Withdrawn) The medical device of Claim 1, wherein at least a portion of the optical signal comprises a wavelength in a mid-infrared wavelength range.

10. (Withdrawn) The medical device of Claim 1, wherein at least a portion of the optical signal comprises a wavelength that is at least partially absorbed by cells of the body of the patient.

11. (Withdrawn) The medical device of Claim 1, wherein the optical signal comprises a plurality of wavelengths.

12. (Withdrawn) The medical device of Claim 11, wherein the waveguide structure assists in comparing at least two of the plurality of optical signals to determine a signal-to-noise ratio of a spectroscopic measurement during the spectroscopic procedure.

13. (Withdrawn) The medical device of Claim 11, wherein the waveguide structure assists in facilitating spectroscopic measurements of the multiple wavelength optical signal at least at a known cancer-free area within the body of the patient and a suspect area within the body of the patient during the spectroscopic procedure.

14. (Withdrawn) The medical device of Claim 13, wherein the waveguide structure assists in facilitating a comparison of the spectroscopic measurements of the cancer-free area and the suspect area.

15. (Withdrawn) The medical device of Claim 1, wherein the medical device is selected from the group consisting of an endoscope, a colonoscope, a gastroscope, an enteroscope, a bronchoscope, a laryngoscope, a choledochoscope, a sigmoidoscope, a duodenoscope, a arthoroscope, a cystoscope, a hyteroscope, and a laparoscope.

16. (Withdrawn) The medical device of Claim 1, wherein the optical signal is generated using a pump laser that is selected from the group consisting of a Nd:YAG laser, a Nd:YLF laser, laser diodes, a semiconductor laser and a cladding pumped fiber laser.

17. (Withdrawn) The medical device of Claim 1, wherein the optical signal is generated using a pump laser that is selected from the group consisting of a continuous wave laser and a pulsed laser.

18. (Withdrawn) A medical device, comprising:

an insertable portion capable of being inserted into a body of a patient; and

a waveguide structure capable of being inserted into the insertable portion and capable of guiding an optical signal into the insertable portion inserted into the body of the patient, wherein the optical signal is used in a medical surgical procedure.

19. (Withdrawn) The medical device of Claim 18, wherein the insertable portion has an inner wall and an outer wall, and the waveguide structure passes within the outer wall of the insertable portion.

20. (Withdrawn) The medical device of Claim 18, wherein the waveguide structure assists in extracting a tissue abnormality from the body of the patient during the surgical procedure.

21. (Withdrawn) The medical device of Claim 18, wherein the surgical procedure is based at least in part on an optical transmission property of cells.

22. (Withdrawn) The medical device of Claim 18, wherein the waveguide structure assists in ablating cells from the body of the patient during the surgical procedure.

23. (Withdrawn) The medical device of Claim 18, wherein the waveguide structure is selected from the group consisting of an optical fiber, a hollow tube waveguide, an air core waveguide, and a planar waveguide.

24. (Withdrawn) The medical device of Claim 18, wherein the waveguide structure is an optical fiber, and at least a portion of the optical fiber is selected from the group consisting of a ZBLAN fiber, a sulphide fiber, a selenide fiber, a telluride fiber, and a fused silica fiber.

25. (Withdrawn) The medical device of Claim 18, wherein at least a portion of the optical signal comprises a wavelength of 1.7 microns or more.

26. (Withdrawn) The medical device of Claim 18, wherein at least a portion of the optical signal comprises a wavelength in a mid-infrared wavelength range.

27. (Withdrawn) The medical device of Claim 18, wherein at least a portion of the optical signal comprises a wavelength that is at least partially absorbed by tissue of the body of the patient.

28. (Withdrawn) The medical device of Claim 18, wherein the optical signal comprises a plurality of wavelengths.

29. (Withdrawn) The medical device of Claim 18, wherein the optical signal is generated using a pump laser that is selected from the group consisting of a Nd:YAG laser, a Nd:YLF laser, laser diodes, a semiconductor laser and a cladding pumped fiber laser.

30. (Withdrawn) The medical device of Claim 18, wherein the optical signal is generated using a pump laser that is selected from the group consisting of a continuous wave laser and a pulsed laser.

31. (Withdrawn) The medical device of Claim 18, wherein the optical signal is generated using a Raman wavelength shifter.

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Currently Amended) A mid-infrared light source, comprising:

a ~~Raman~~-wavelength shifter capable of shifting a shorter optical signal wavelength to a longer optical signal wavelength based at least in part on a Raman effect in a waveguide, wherein the longer ~~operable to generate an~~ optical signal wavelength comprises ~~comprising~~ a mid-infrared wavelength, and wherein at least a portion of the ~~Raman~~-wavelength shifter comprises ~~comprising~~ a ZBLAN waveguide.

43. (Currently Amended) The mid-infrared light source of Claim 42, wherein the longer optical signal ~~comprises a~~ wavelength ~~of~~ is approximately 1.7 microns or more.

44. (Currently Amended) The mid-infrared light source of Claim 42, wherein the longer optical signal ~~comprises a~~ wavelength is in the range of two (2) microns to ten (10) microns.

45. (Currently Amended) The mid-infrared light source of Claim 42, wherein the longer optical signal ~~comprises a~~ wavelength is in the range of five (5) microns to seven (7) microns.

46. (Original) The mid-infrared light source of Claim 42, wherein the ZBLAN waveguide comprises at least a portion of a gain region of the light source.

47. (Currently Amended) The mid-infrared light source of Claim 42, wherein the ~~Raman~~ wavelength shifter further comprises:

a first reflector coupled to a first end of the ZBLAN waveguide; and

a second reflector coupled to a second end of the ZBLAN waveguide.

48. (Original) The mid-infrared light source of Claim 47, wherein coupling the first and second reflectors operates to form an optical cavity in the light source.

49. (Currently Amended) The mid-infrared light source of Claim 42, wherein the ~~Raman~~ wavelength shifter further comprises:

a reflector coupled to a first end of the ZBLAN waveguide; and

one or more optical gratings coupled to a second end of the ZBLAN waveguide.

50. (Currently Amended) The mid-infrared light source of Claim 42, wherein the ~~Raman~~ wavelength shifter further comprises:

one or more first optical gratings coupled to a first end of the ZBLAN waveguide; and

one or more second optical gratings coupled to a second end of the ZBLAN waveguide.

51. (Currently Amended) The mid-infrared light source of Claim 42, wherein the ~~Raman~~ wavelength shifter further comprises:

one or more reflectors coupled to a first end of the ZBLAN waveguide; and

a pulse source coupled to a second end of the ZBLAN waveguide.

52. (Currently Amended) The mid-infrared light source of Claim 42, ~~Claim 51,~~ wherein the ~~pulse source is operable to provide an output signal having~~ shorter optical signal wavelength comprises a pulse width in the range of two (2) nanoseconds to one hundred (100) milliseconds.

53. (Currently Amended) The mid-infrared light source of Claim 42, ~~Claim 51,~~ wherein the ~~pulse source is operable to provide an output signal having~~ shorter optical signal wavelength comprises a pulse repetition rate in the range of two (2) hertz to one hundred (100) megahertz.

54. (Currently Amended) The mid-infrared light source of Claim 42, further comprising a pump laser capable of generating ~~a pump signal operable to pump the Raman wavelength shifter~~ the shorter optical signal wavelength.

55. (Original) The mid-infrared light source of Claim 54, wherein the pump laser is selected from the group consisting of a continuous wave laser and a pulsed laser.

56. (Currently Amended) The mid-infrared light source of Claims 54, wherein the pump laser is selected from the group consisting of a Nd:YAG laser, a Nd:YLF laser, laser diodes, a semiconductor laser, and a cladding ~~pump~~ pumped fiber ~~laser~~.

57. (Currently Amended) The mid-infrared light source of Claim 42, wherein the ~~Raman~~ wavelength shifter is pumped by an intermediate ~~another Raman~~ wavelength shifter comprising a waveguide that is substantially different than the ZBLAN waveguide.

58. (Currently Amended) The mid-infrared light source of Claim 57, ~~Claim 51,~~ wherein the ~~Raman wavelength~~ intermediate wavelength shifter ~~is operable to communicate the optical signal to a portion of a body associated with a patient~~ comprises at least in part a fused silica fiber and wherein an intermediate output wavelength of the intermediate wavelength shifter is less than 2.5 microns.

59. (Currently Amended) The mid-infrared light source of Claim 42, wherein the ~~Raman~~ wavelength shifter is coupled to one or more external waveguides and wherein a coupling loss between the ~~Raman~~ wavelength shifter and the one or more external waveguides comprises no more than five (5) decibels.

60. (Currently Amended) The mid-infrared light source of Claim 59, wherein the external waveguide comprises one or more optical fibers.

61. (Currently Amended) The mid-infrared light source of Claim 59, wherein the longer optical signal wavelength is communicated to a portion of a body associated with a patient by the one or more external waveguides coupled to the ~~Raman~~ wavelength shifter.

62. (Original) The mid-infrared light source of Claim 42, wherein the ZBLAN waveguide is selected from the group consisting of an optical fiber, a hollow tube waveguide, an air core waveguide, and a planar waveguide.

63. (Original) The mid-infrared light source of Claim 42, wherein the ZBLAN waveguide is a single mode optical fiber.

64. (New) A long wavelength light source, comprising:

a wavelength shifter capable of shifting a shorter optical signal wavelength to a longer optical signal wavelength based at least in part on a Raman effect in a waveguide, wherein the wavelength shifter comprises:

a pump laser producing the shorter optical signal wavelength;

an intermediate stage coupled to the pump laser and producing an intermediate optical signal wavelength, wherein the intermediate optical signal wavelength is longer than the shorter optical signal wavelength; and

a final stage operable to generate the longer optical signal wavelength, wherein the final stage comprises at least in part a ZBLAN waveguide and wherein the longer optical signal wavelength is greater than 1.7 microns and is greater than the intermediate optical signal wavelength.

65. (New) The long wavelength light source of Claim 64, wherein the pump laser is selected from the group consisting of a Nd:YAG laser, a Nd:YLF laser, laser diodes, a semiconductor laser, and a cladding pumped fiber.

66. (New) The long wavelength light source of Claim 64, wherein the intermediate stage comprises at least in part fused silica fiber.

67. (New) The long wavelength light source of Claim 64, wherein the ZBLAN waveguide is selected from the group consisting of an optical fiber, a hollow tube waveguide, an air core waveguide, and a planar waveguide.

68. (New) The long wavelength light source of Claim 64, wherein the longer optical signal wavelength is greater than 2.8 microns.

69. (New) The long wavelength light source of Claim 64, wherein the pump laser is a pulsed laser with a pulse width in the range of two (2) nanoseconds to one hundred (100) milliseconds.